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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/473,868 12/28/99 HANAOKA

K 0941.63502

EXAMINER

WM02/1002

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ART UNIT

PAPER NUMBER

2674

DATE MAILED:

10/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/473,868

Applicant(s)
Hanoka et al.

Examiner
Abbas Abdulsalam

Group Art Unit
2674



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-16 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. A certified copy of a foreign document has been received.

Drawings

2. Drawings are objected to because of the reasons set forth on form PTO 948.

Claim Rejections 35 U.S.C. 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (USPN 6005646).

Regarding claims 1 and 8, Nakamura teaches a liquid crystal display system with a crystal layer (1) located between glass substrates (2) and (3). See Fig 3. Nakamura teaches a thin film transistor, TFT (6) in connection to a voltage application driving method. Nakamura teaches display of pixels as it relates to LCD device as well as electrodes of thin film transistors. Furthermore, Nakamura teaches source electrodes of the TFT with respect to their corresponding display electrodes, and also teaches a common electrode (22) located on the opposed substrate. Moreover, Nakamura teaches the display electrode in connection with a formation of auxiliary capacitor (10). See column 4, lines 1-17, and Fig 7. However, Nakamura does not specifically

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teach a common voltage which is equal to a central voltage, and the production of an electric field between an auxiliary electrode and conductor pattern. Nakamura on the other hand teaches about a voltage application control method for applying a voltage to the liquid crystal layer. Nakamura also teaches an application of a voltage to provide an effective electric field. See column 3, lines 15-20, and column 4, lines 29-39.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to utilize Nakamura's voltage application control method and production of an electric field. One would have been motivated in view of Nakamura that a voltage application control method and a process of providing an effective electric field can be used to furnish the desired common voltage and electric field.

Regarding claims 2-5, 9-12 and 15 it has been discussed above. In addition, Nakamura teaches a given voltage applied to a crystal layer in comparison with a threshold voltage. See column 1, lines 55-60.

Regarding claim 6 and 13, Nakamura teaches about a smaller vertical electric field in the vicinity of the electrodes. See column 2. Lines 60-67.

Regarding claim 7 and 14, Nakamura teaches a liquid crystal layer and a transformation of its initial homogeneous state using a high a high speed. Nakamura also teaches the application time of a pulse as it relates to the speed during the transition state. See column 1, lines 5-10 and column 4, lines 48-63.

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Regarding claim 16, Nakamura teaches a transition time as compared to H-com inversion and the degree of performance with respect to liquid crystals A, B, and C.

Conclusion

4. The prior art made of record and not relied upon is considered to applicant's disclosure.

The following arts are cited for further reference.

U.S. Pat No. 5,426,447 to Lee

U.S. Pat No. 5,483,262 to Bird et al.

U.S. Pat No. 5,610,736 to Asai

U.S. Pat No. 6,064,460 to Ohta et al.

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5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to crustal park II, crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.



Abbas abdulsalam

Examiner

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 Art Unit 2674